

Fig 1(a)

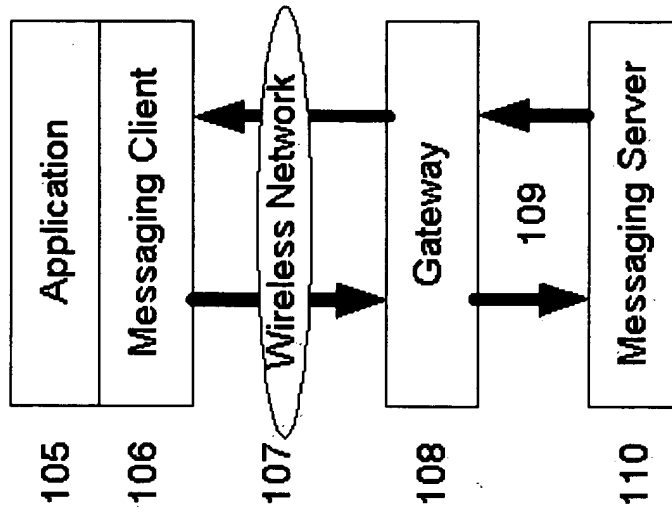


Fig 1(b)

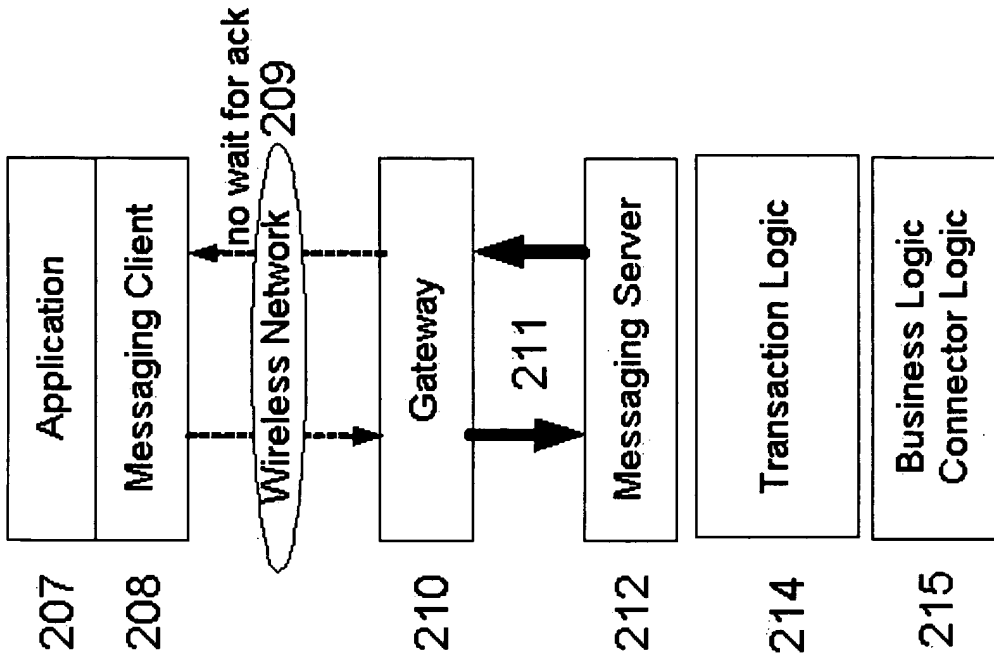


Fig 2(a)

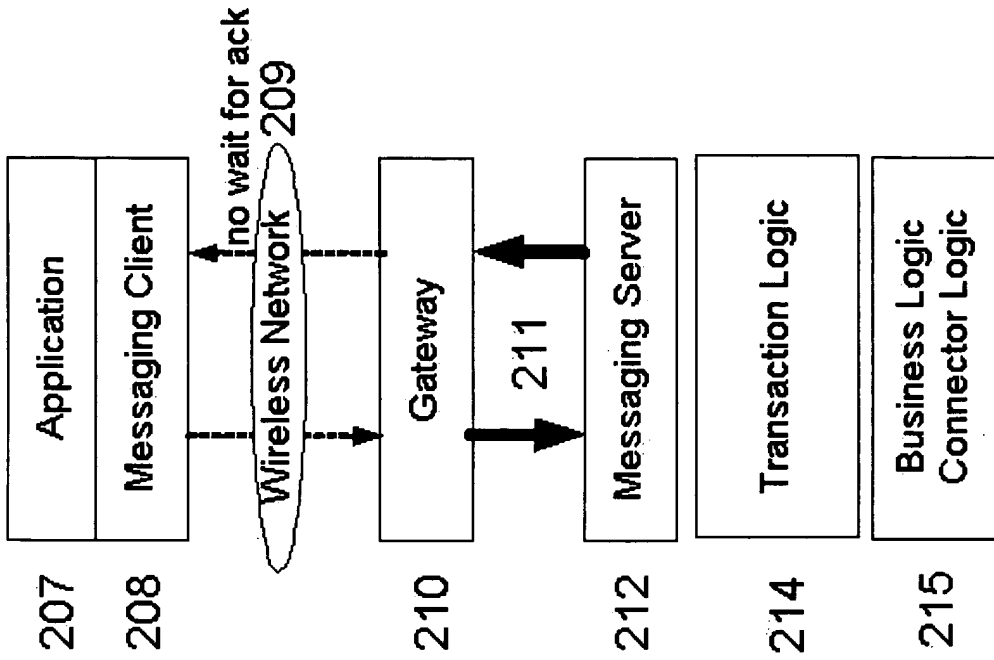


Fig 2(b)

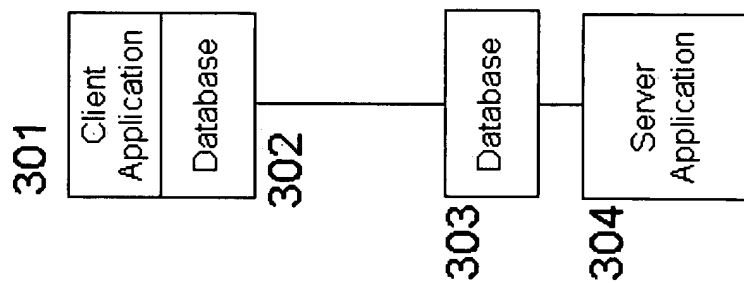


Fig 3(a)

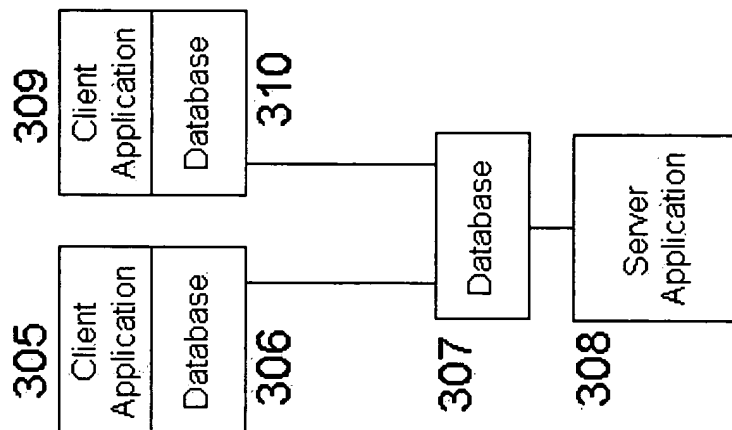


Fig 3(b)

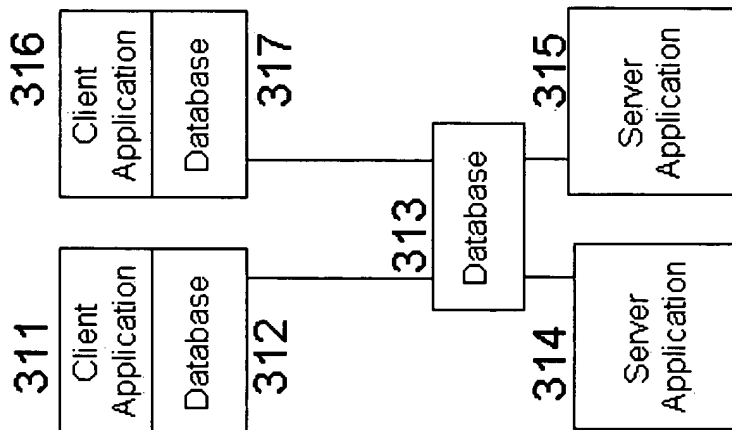


Fig 3(c)

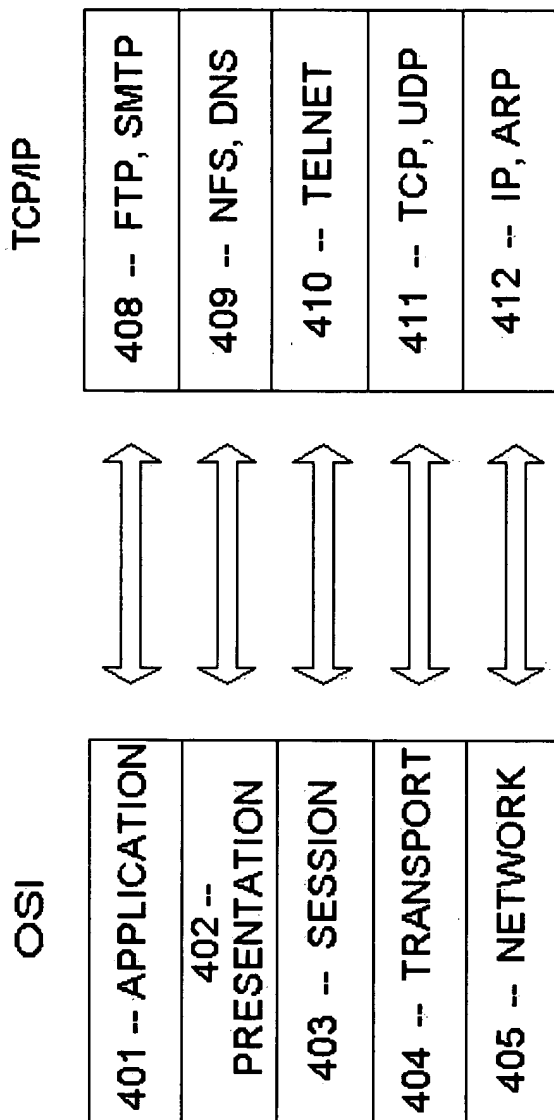


Fig 4(b)

Fig 4(a)

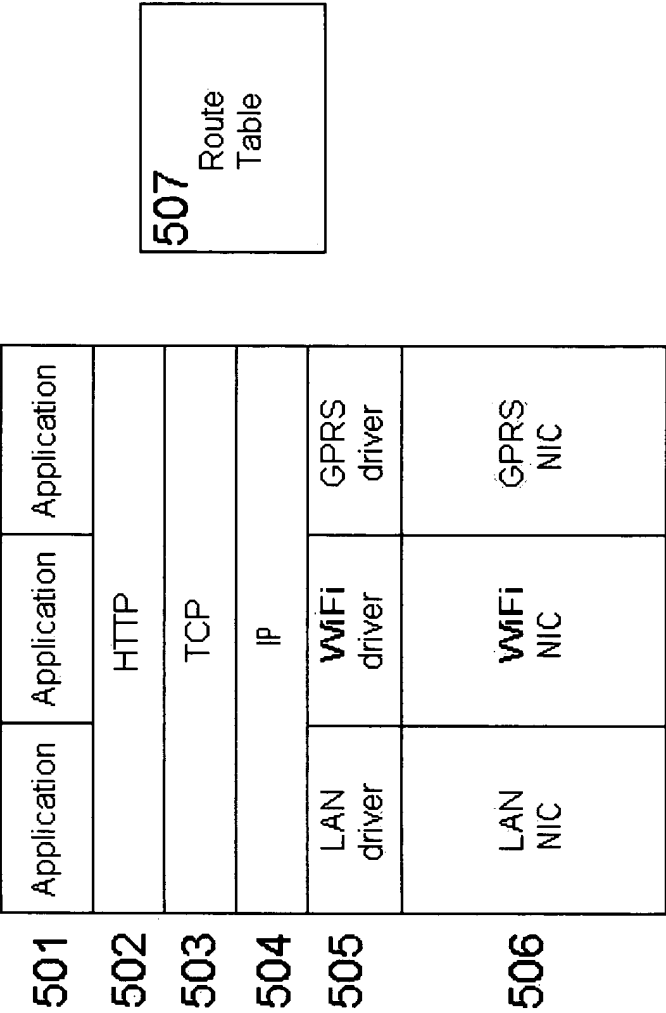


Fig 5

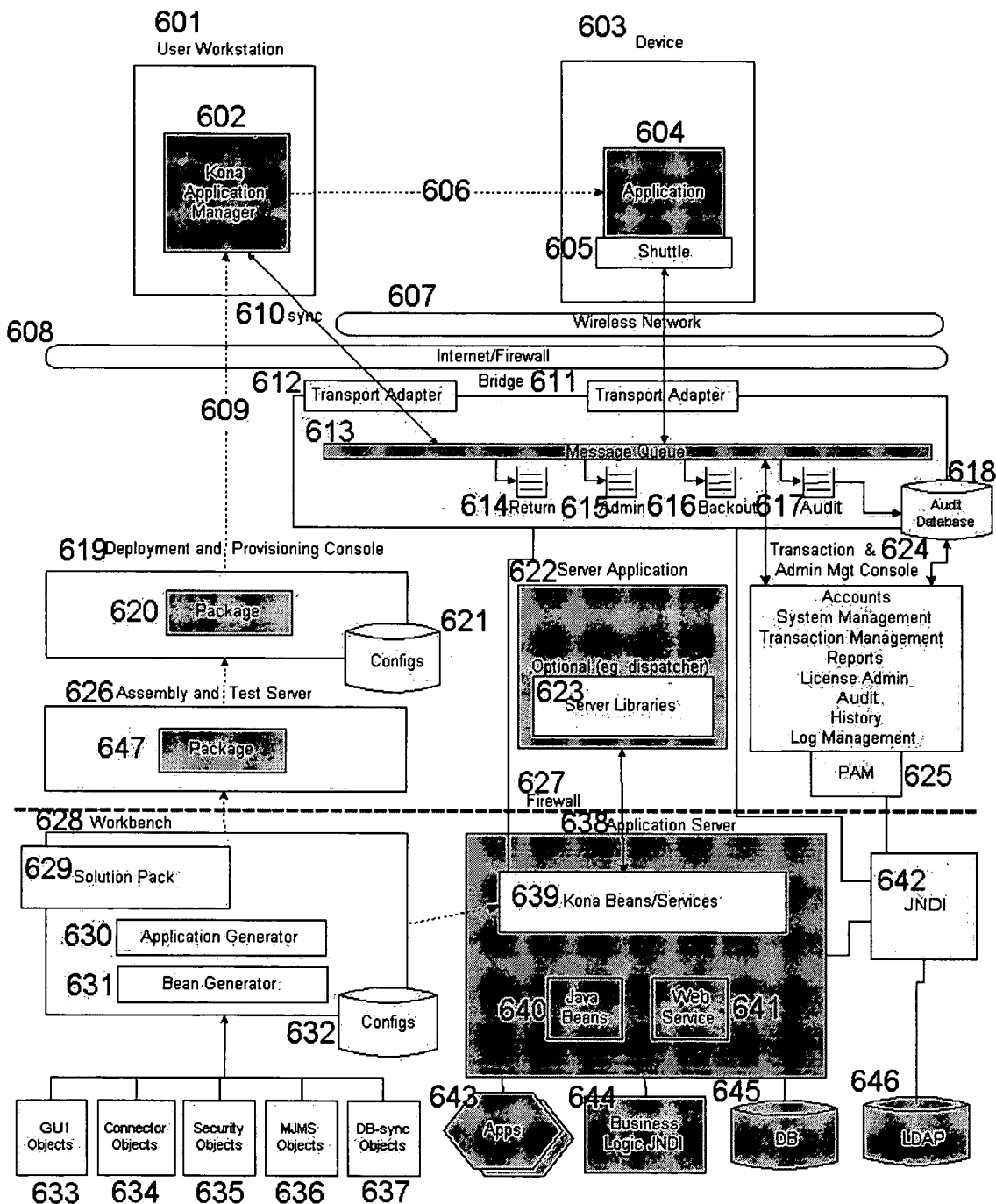
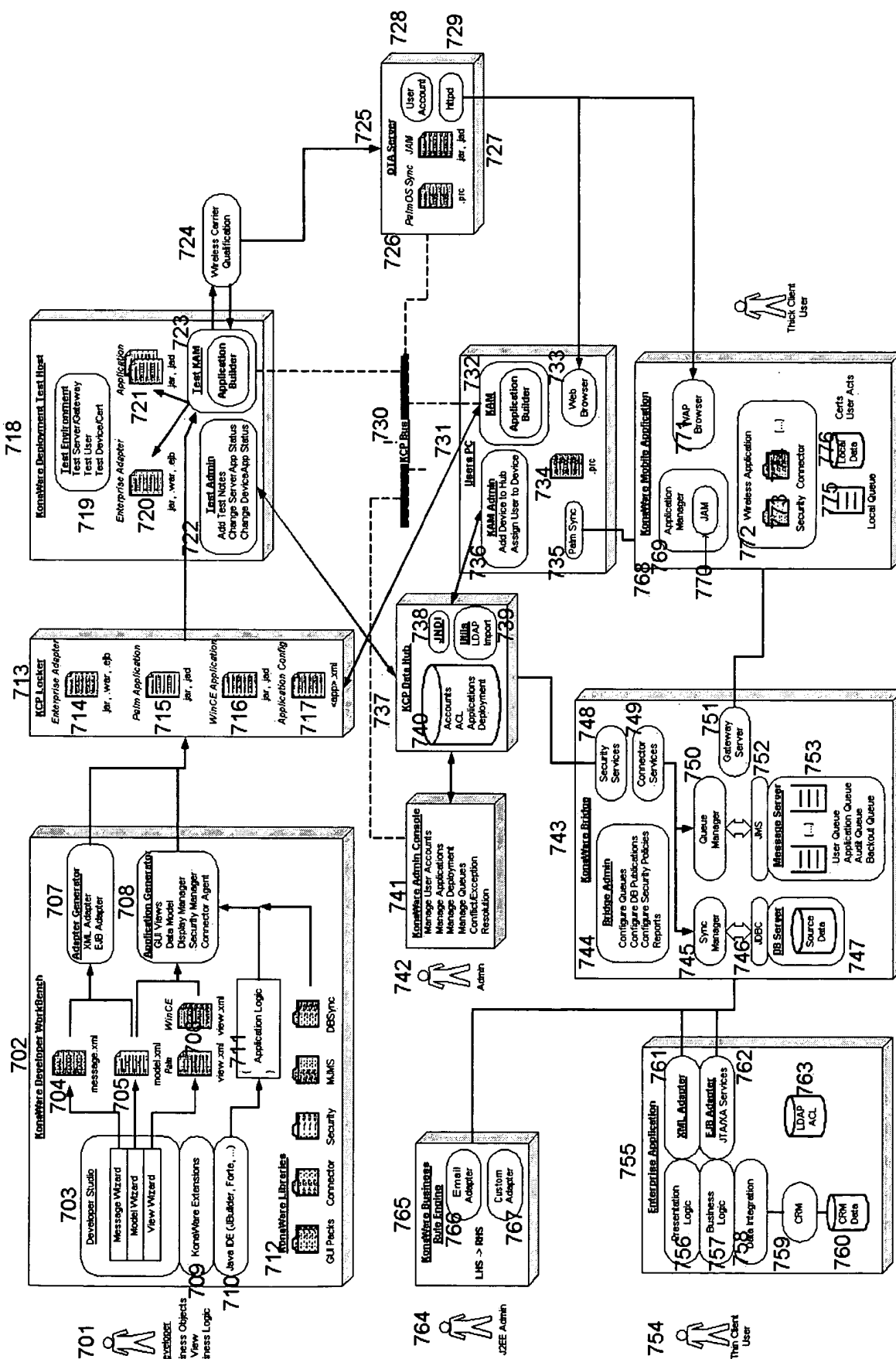


Fig 6



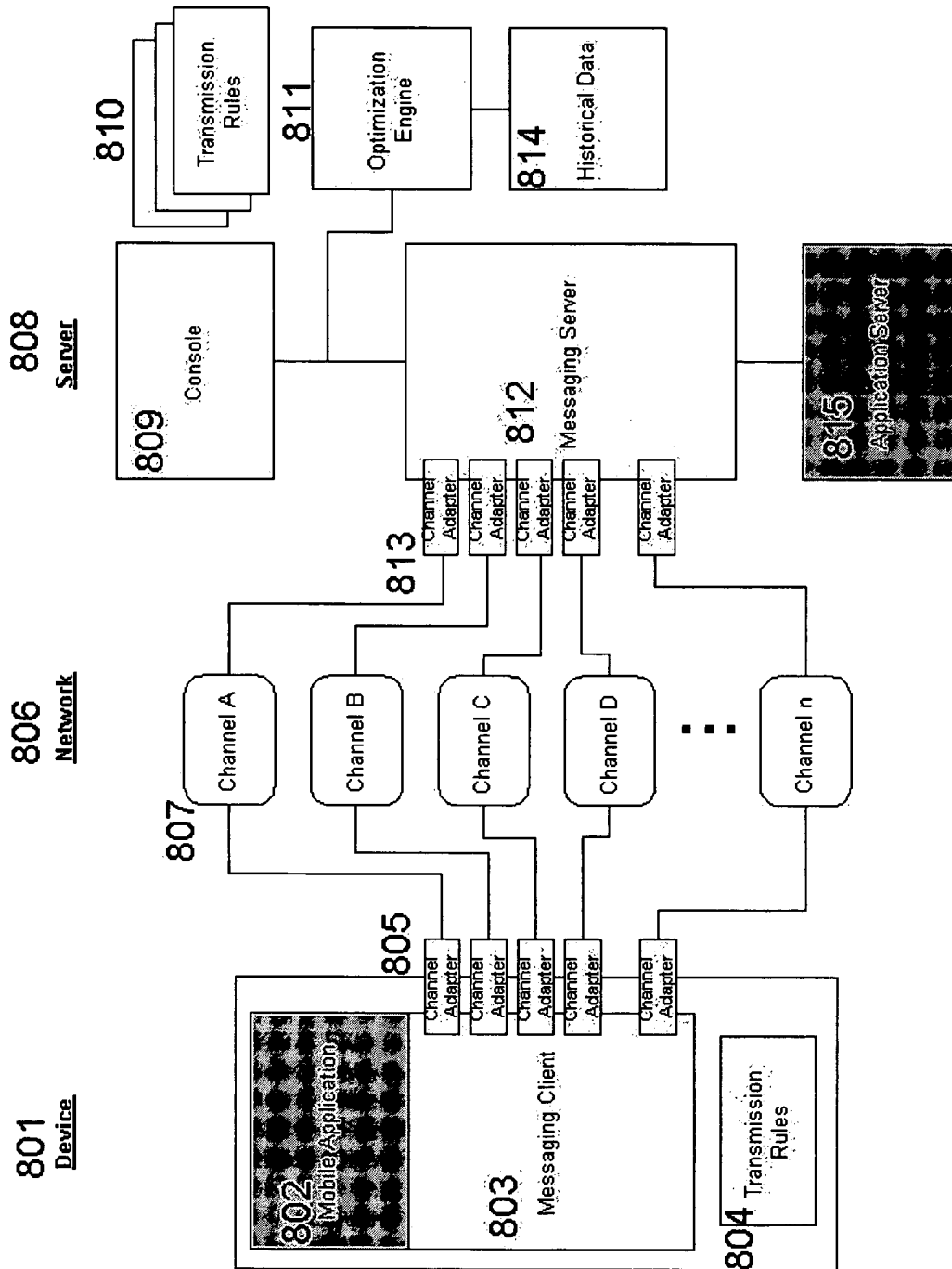


Fig 8



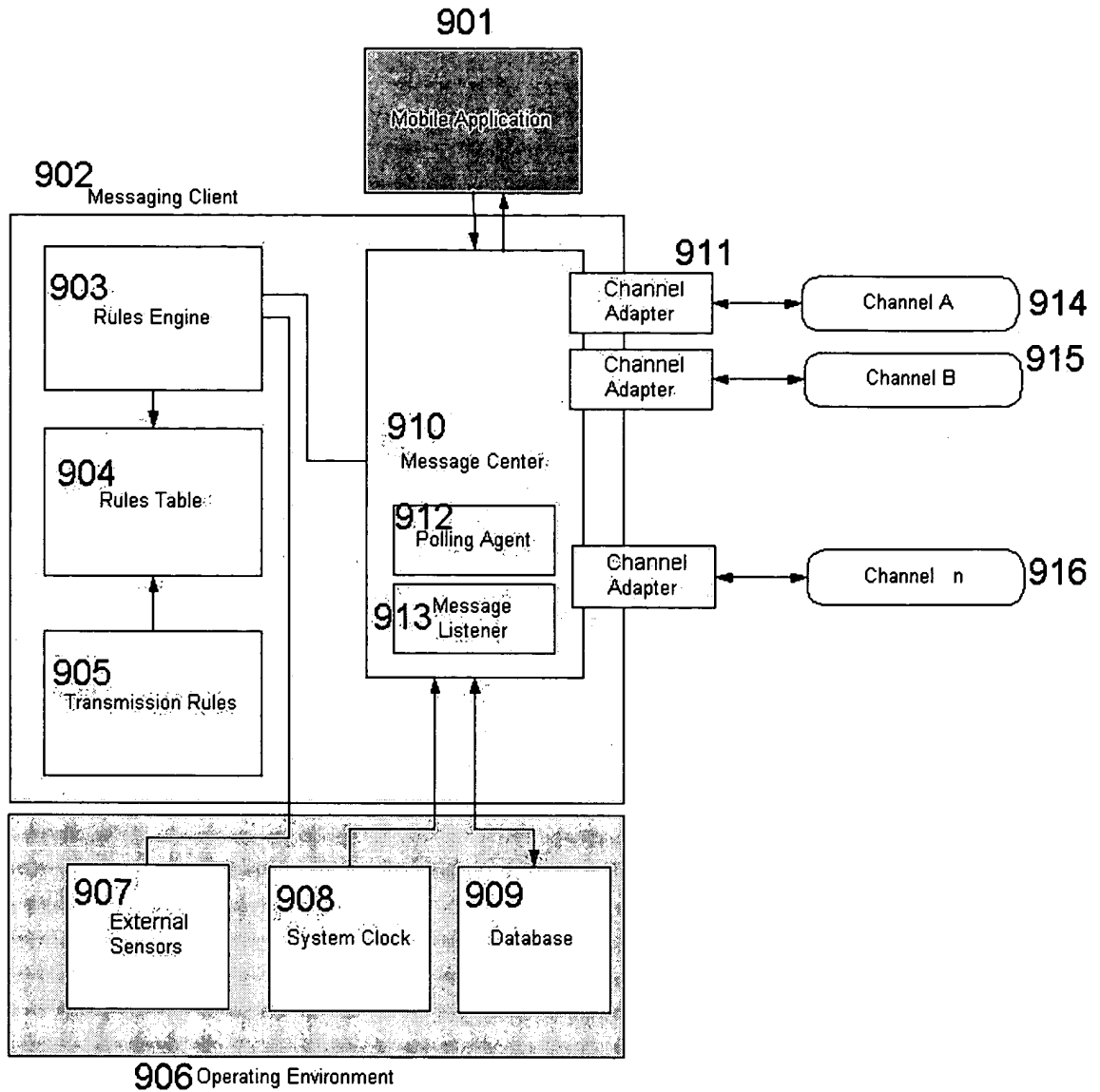


Fig 9

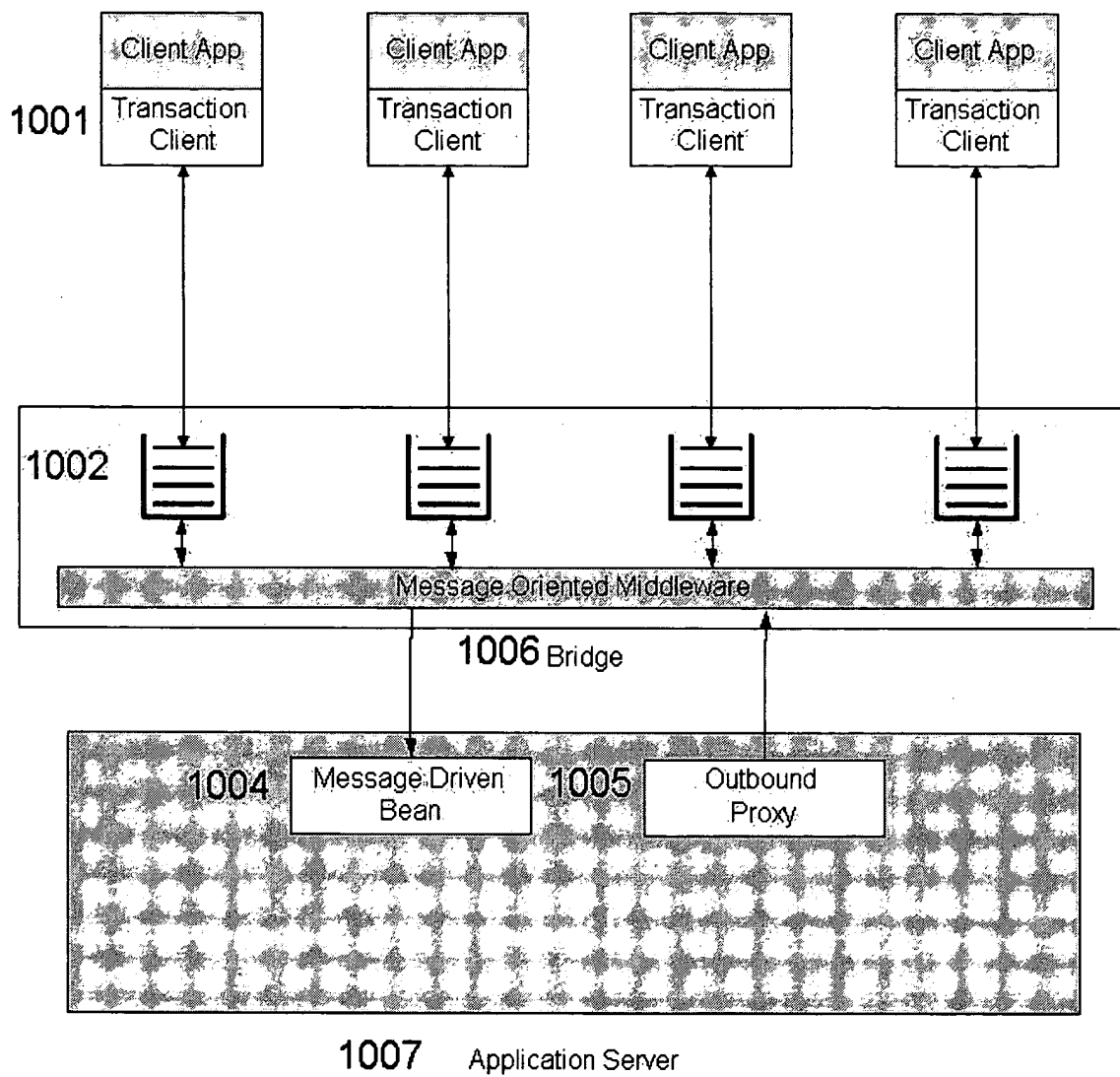


Fig 10

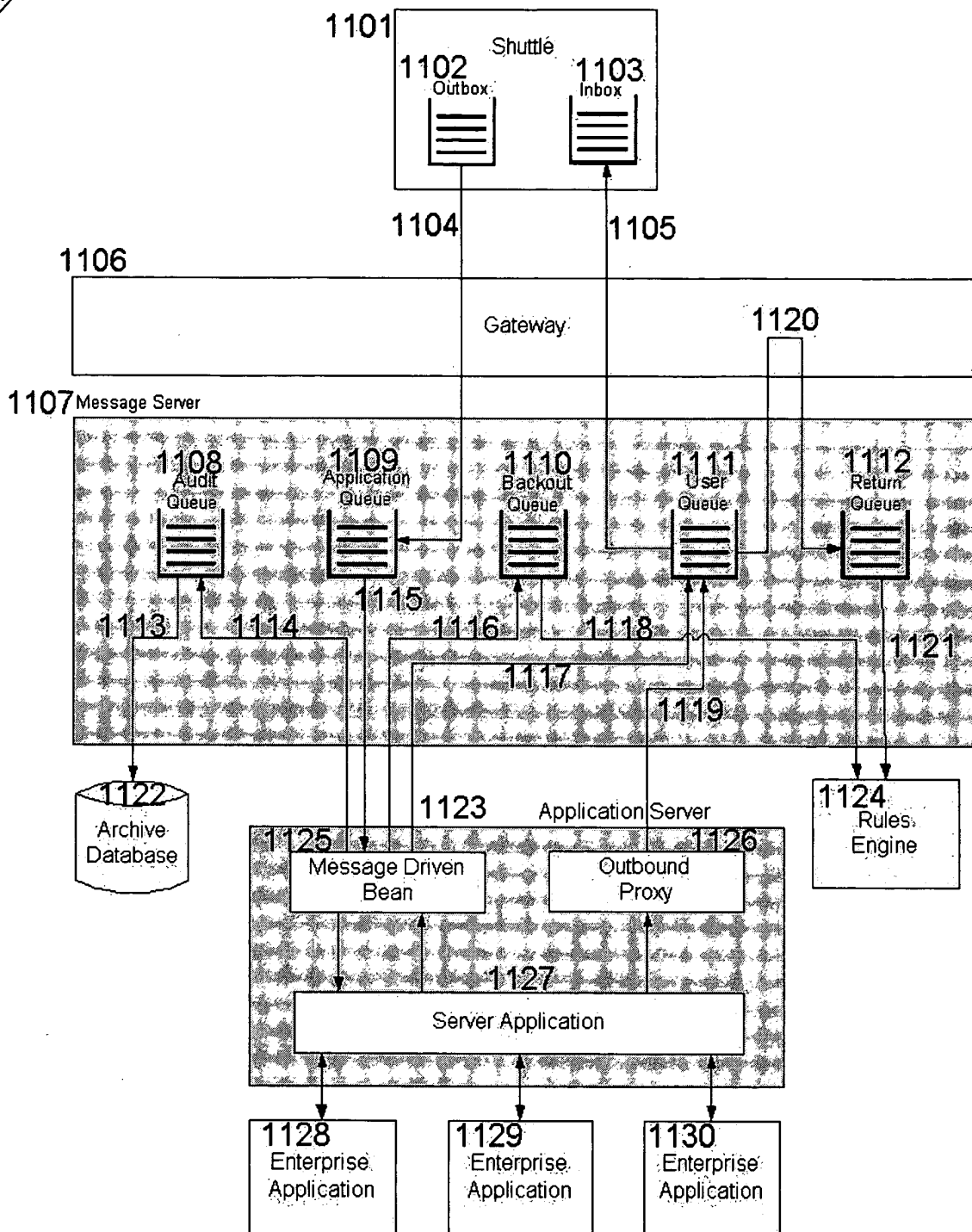


Fig 11

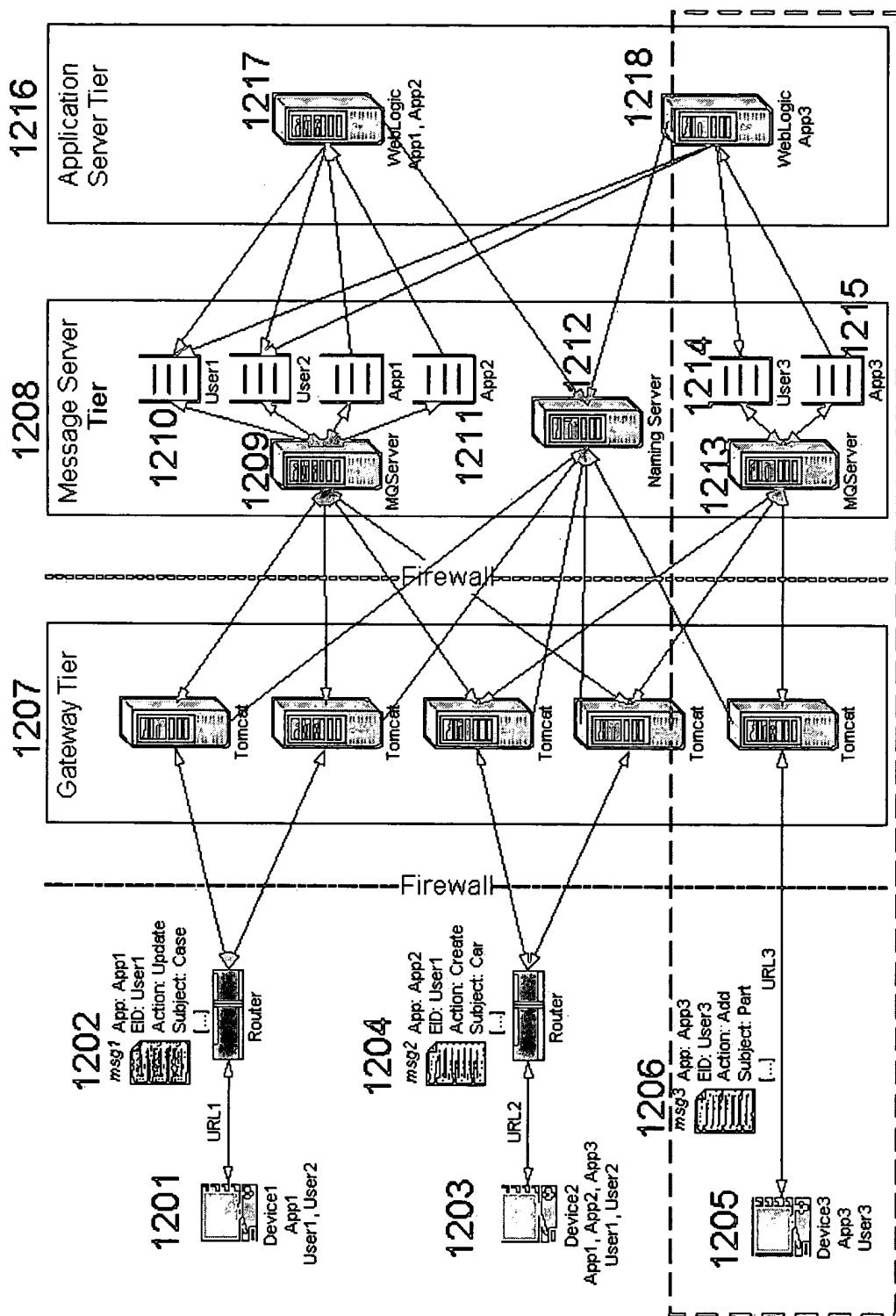


Fig 12

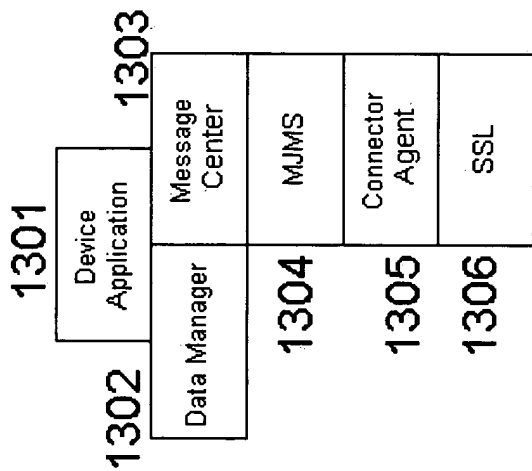


Fig 13(a)

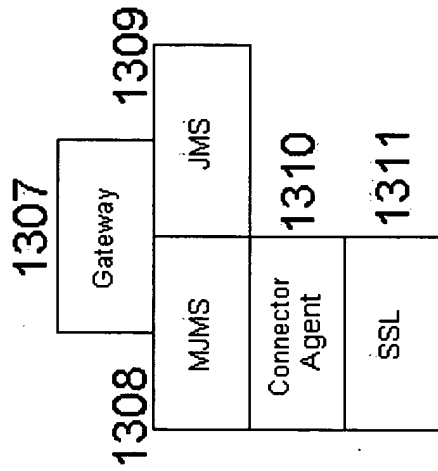


Fig 13(b)

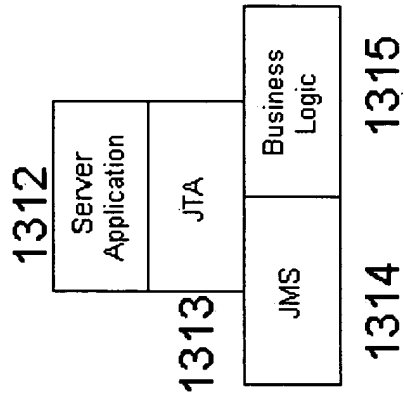


Fig 13(c)

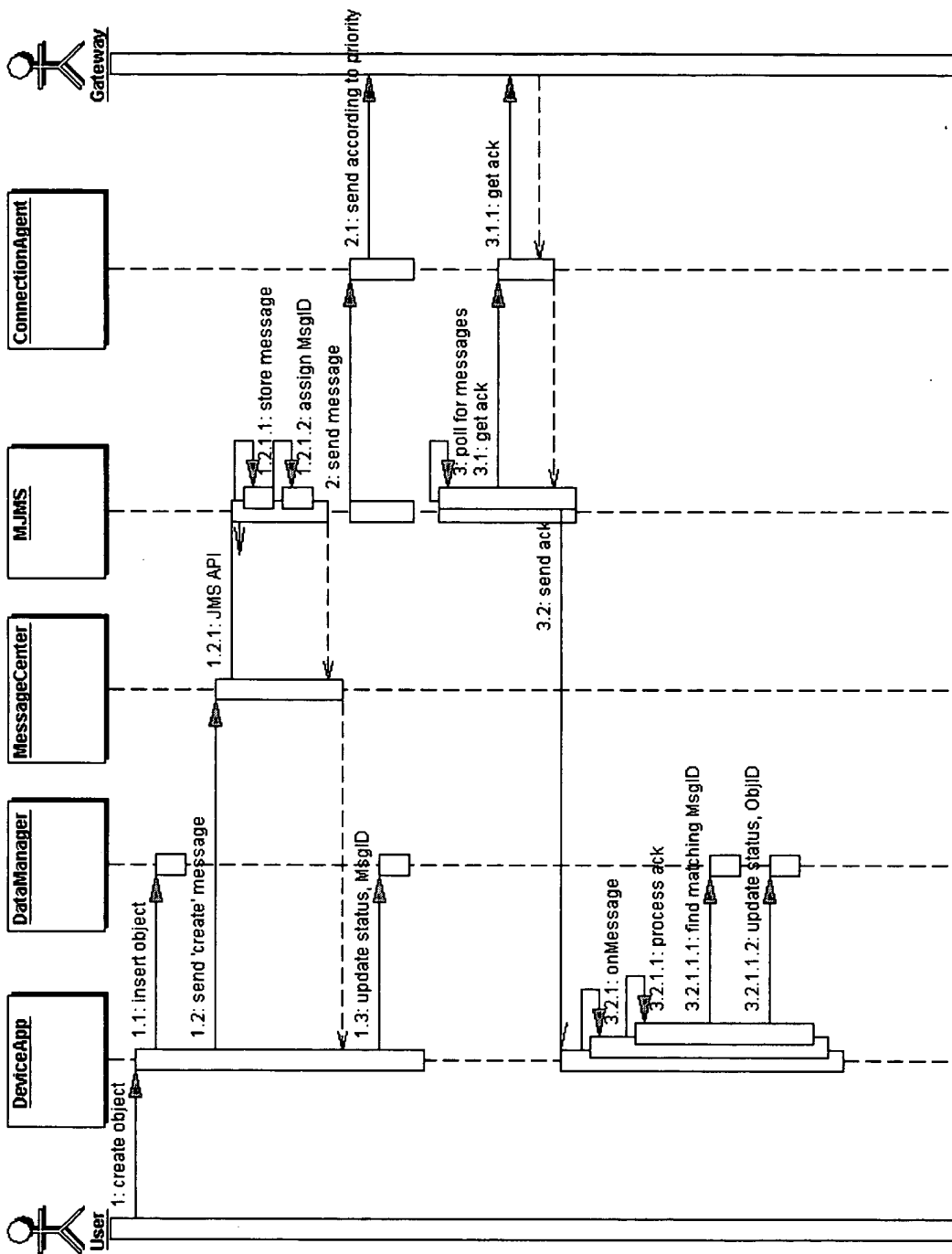


Fig 14

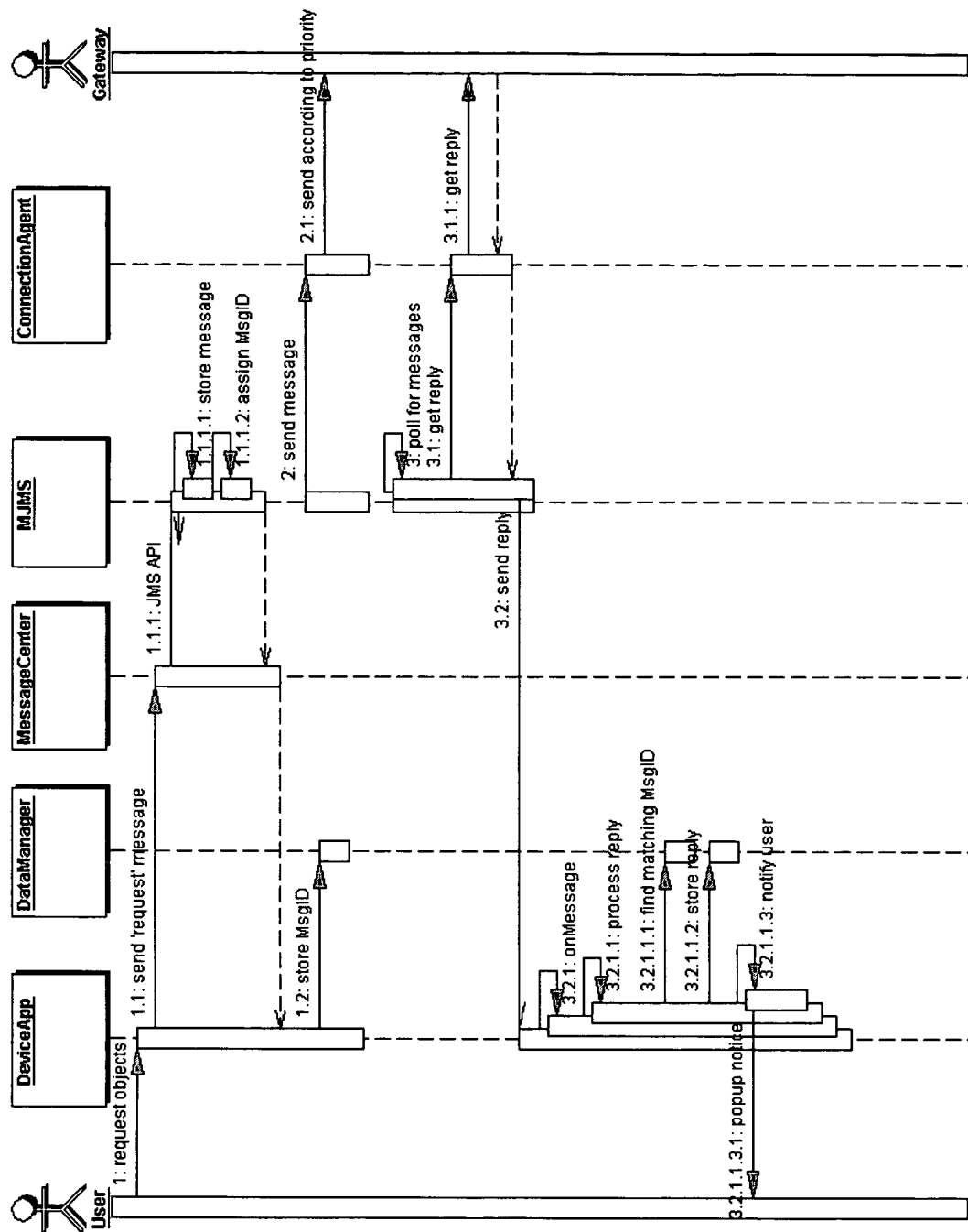


Fig 15

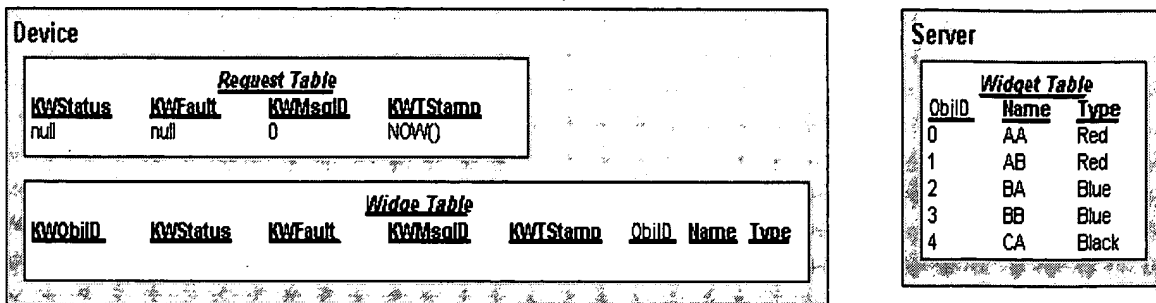


Fig 16



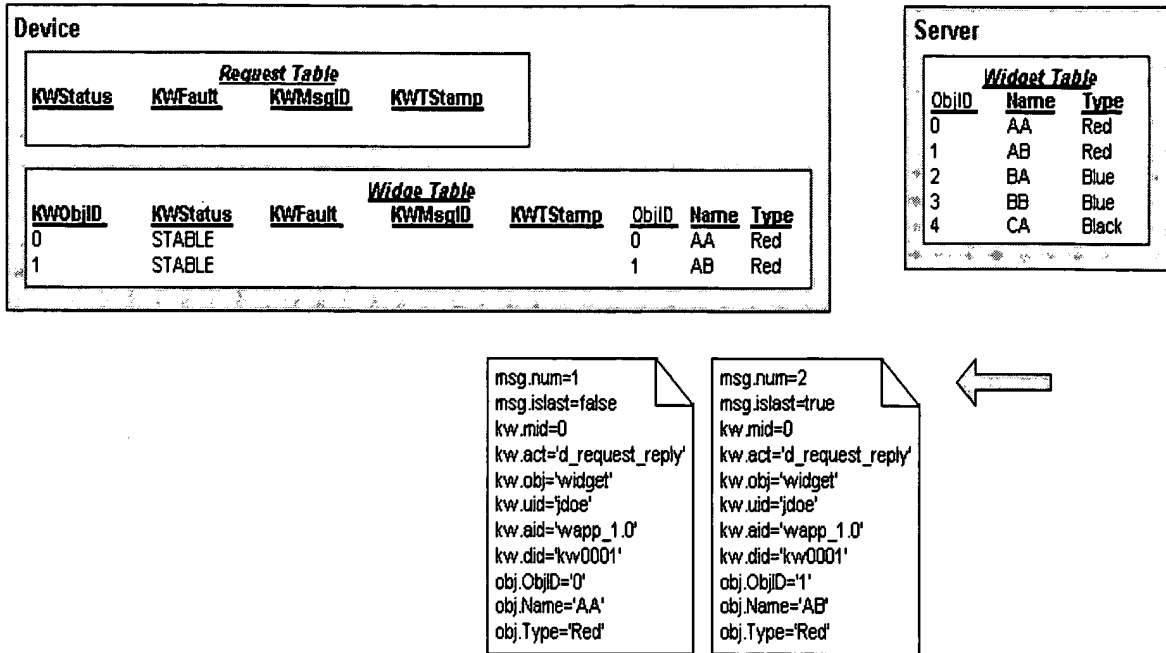
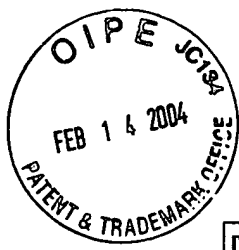


Fig 17



Device

| <u>Request Table</u> |                |                |                 |
|----------------------|----------------|----------------|-----------------|
| <u>KWStatus</u>      | <u>KWFault</u> | <u>KWMsgID</u> | <u>KWTStamp</u> |

| <u>Widget Table</u> |                 |                |                |                 |              |             |             |
|---------------------|-----------------|----------------|----------------|-----------------|--------------|-------------|-------------|
| <u>KWObjID</u>      | <u>KWStatus</u> | <u>KWFault</u> | <u>KWMsgID</u> | <u>KWTStamp</u> | <u>ObjID</u> | <u>Name</u> | <u>Type</u> |
| 0                   | STABLE          |                |                |                 | 0            | AA          | Red         |
| 1                   | STABLE          |                |                |                 | 1            | AB          | Red         |
| 2                   | PENDING_CREATE  |                |                |                 | -1           | AC          | Red         |

| Server              |             |             |
|---------------------|-------------|-------------|
| <u>Widget Table</u> |             |             |
| <u>ObjID</u>        | <u>Name</u> | <u>Type</u> |
| 0                   | AA          | Red         |
| 1                   | AB          | Red         |
| 2                   | BA          | Blue        |
| 3                   | BB          | Blue        |
| 4                   | CA          | Black       |

Fig 18

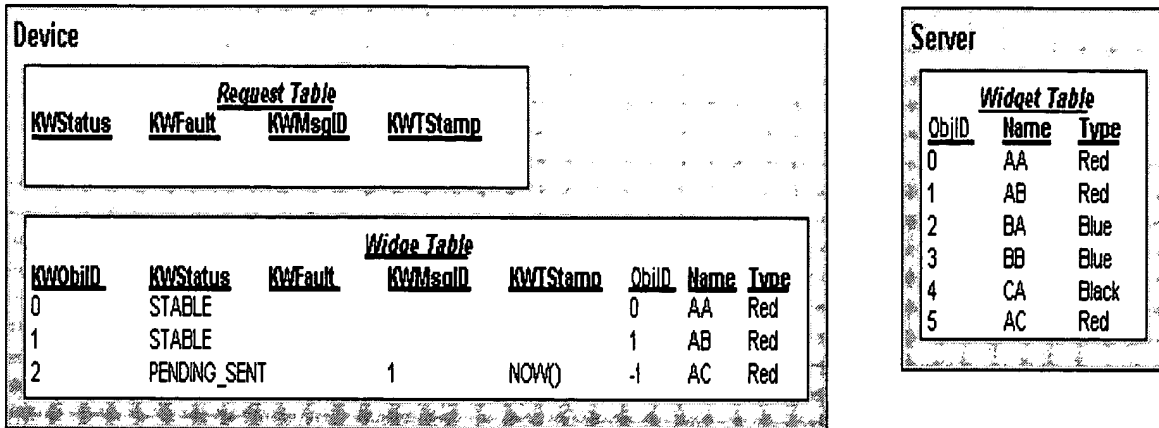


| Device               |                 |                |                 |                 |
|----------------------|-----------------|----------------|-----------------|-----------------|
| <u>Request Table</u> |                 |                |                 |                 |
| <u>KWStatus</u>      | <u>KWFault</u>  | <u>KWMsgID</u> | <u>KWTStamp</u> |                 |
|                      |                 |                |                 |                 |
| <u>KWObjID</u>       | <u>KWStatus</u> | <u>KWFault</u> | <u>KWMsgID</u>  | <u>KWTStamp</u> |
| 0                    | STABLE          |                |                 |                 |
| 1                    | STABLE          |                |                 |                 |
| 2                    | PENDING_SENT    |                | 1               | NOW()           |

| Server              |             |             |
|---------------------|-------------|-------------|
| <u>Widget Table</u> |             |             |
| <u>ObjID</u>        | <u>Name</u> | <u>Type</u> |
| 0                   | AA          | Red         |
| 1                   | AB          | Red         |
| 2                   | BA          | Blue        |
| 3                   | BB          | Blue        |
| 4                   | CA          | Black       |

msg.num=1  
msg.islast=true  
kw.mid=1  
kw.act='d\_create'  
kw.obj='widget'  
kw.uid='jdoe'  
kw.sid='wapp\_1.0'  
kw.did='kw0001'  
obj.ObjID='-1'  
obj.Name='AC'  
obj.Type='Red'

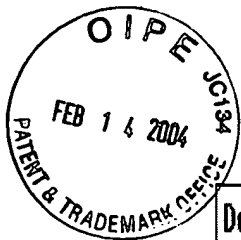
Fig 19



msg.num=1  
 msg.islast=true  
 kw.mid=1  
 kw.act='d\_create\_ack'  
 kw.obj='widget'  
 kw.uid='jdoe'  
 kw.aid='wapp\_1.0'  
 kw.did='kw0001'  
 obj.ObjID='5'

←

Fig 20



### Device

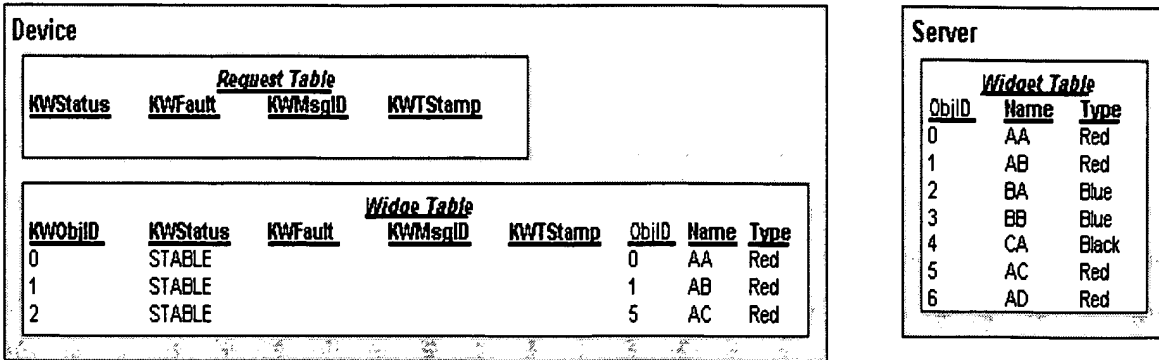
| <u>Request Table</u> |                |                |                 |
|----------------------|----------------|----------------|-----------------|
| <u>KWStatus</u>      | <u>KWFault</u> | <u>KWMsgID</u> | <u>KWTStamp</u> |

| <u>Widget Table</u> |                 |                |                |                 |              |             |             |
|---------------------|-----------------|----------------|----------------|-----------------|--------------|-------------|-------------|
| <u>KWObjID</u>      | <u>KWStatus</u> | <u>KWFault</u> | <u>KWMsgID</u> | <u>KWTStamp</u> | <u>ObjID</u> | <u>Name</u> | <u>Type</u> |
| 0                   | STABLE          |                |                |                 | 0            | AA          | Red         |
| 1                   | STABLE          |                |                |                 | 1            | AB          | Red         |
| 2                   | STABLE          |                |                |                 | 5            | AC          | Red         |

### Server

| <u>Widget Table</u> |             |             |
|---------------------|-------------|-------------|
| <u>ObjID</u>        | <u>Name</u> | <u>Type</u> |
| 0                   | AA          | Red         |
| 1                   | AB          | Red         |
| 2                   | BA          | Blue        |
| 3                   | BB          | Blue        |
| 4                   | CA          | Black       |
| 5                   | AC          | Red         |

Fig 21



msg.num=1  
msg.islast=true  
kw.mid=s1  
kw.act='s\_create'  
kw.obj='widget'  
kw.uid='jdoe'  
kw.aid='wapp\_1.0'  
kw.did=null  
obj.ObjID='6'  
obj.Name='AD'  
obj.Type='Red'



Fig 22



Device

| <u>Request Table</u> |                |                |                 |
|----------------------|----------------|----------------|-----------------|
| <u>KWStatus</u>      | <u>KWFault</u> | <u>KWMsgID</u> | <u>KWTStamp</u> |

| <u>Widget Table</u> |                 |                |                |                 |              |             |             |
|---------------------|-----------------|----------------|----------------|-----------------|--------------|-------------|-------------|
| <u>KWObjID</u>      | <u>KWStatus</u> | <u>KWFault</u> | <u>KWMsgID</u> | <u>KWTStamp</u> | <u>ObjID</u> | <u>Name</u> | <u>Type</u> |
| 0                   | STABLE          |                |                |                 | 0            | AA          | Red         |
| 1                   | STABLE          |                |                |                 | 1            | AB          | Red         |
| 2                   | STABLE          |                |                |                 | 5            | AC          | Red         |
| 3                   | STABLE          |                |                |                 | 6            | AD          | Red         |

| Server              |             |             |
|---------------------|-------------|-------------|
| <u>Widget Table</u> |             |             |
| <u>ObjID</u>        | <u>Name</u> | <u>Type</u> |
| 0                   | AA          | Red         |
| 1                   | AB          | Red         |
| 2                   | BA          | Blue        |
| 3                   | BB          | Blue        |
| 4                   | CA          | Black       |
| 5                   | AC          | Red         |
| 6                   | AD          | Red         |

Fig 23

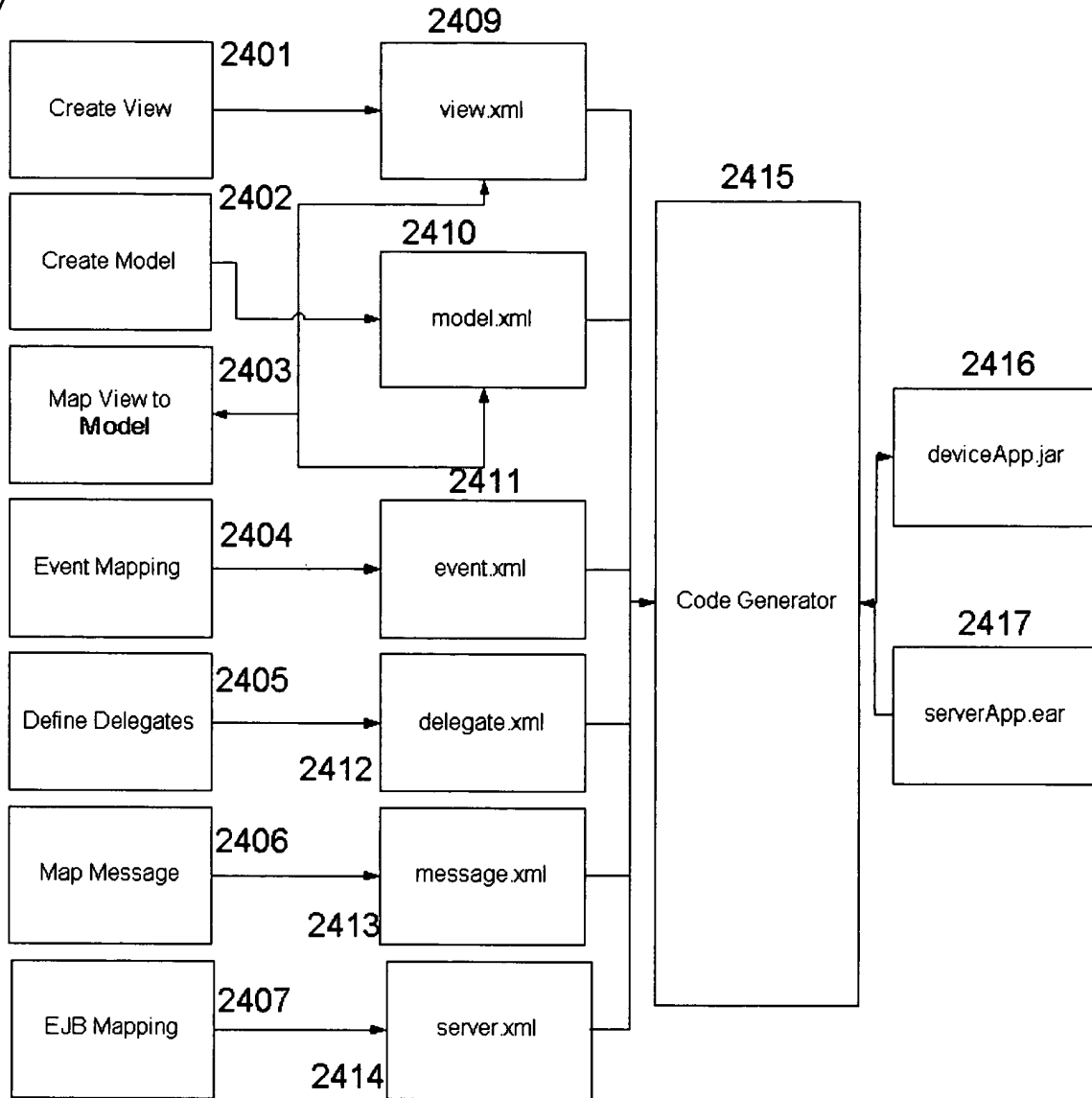


Fig 24



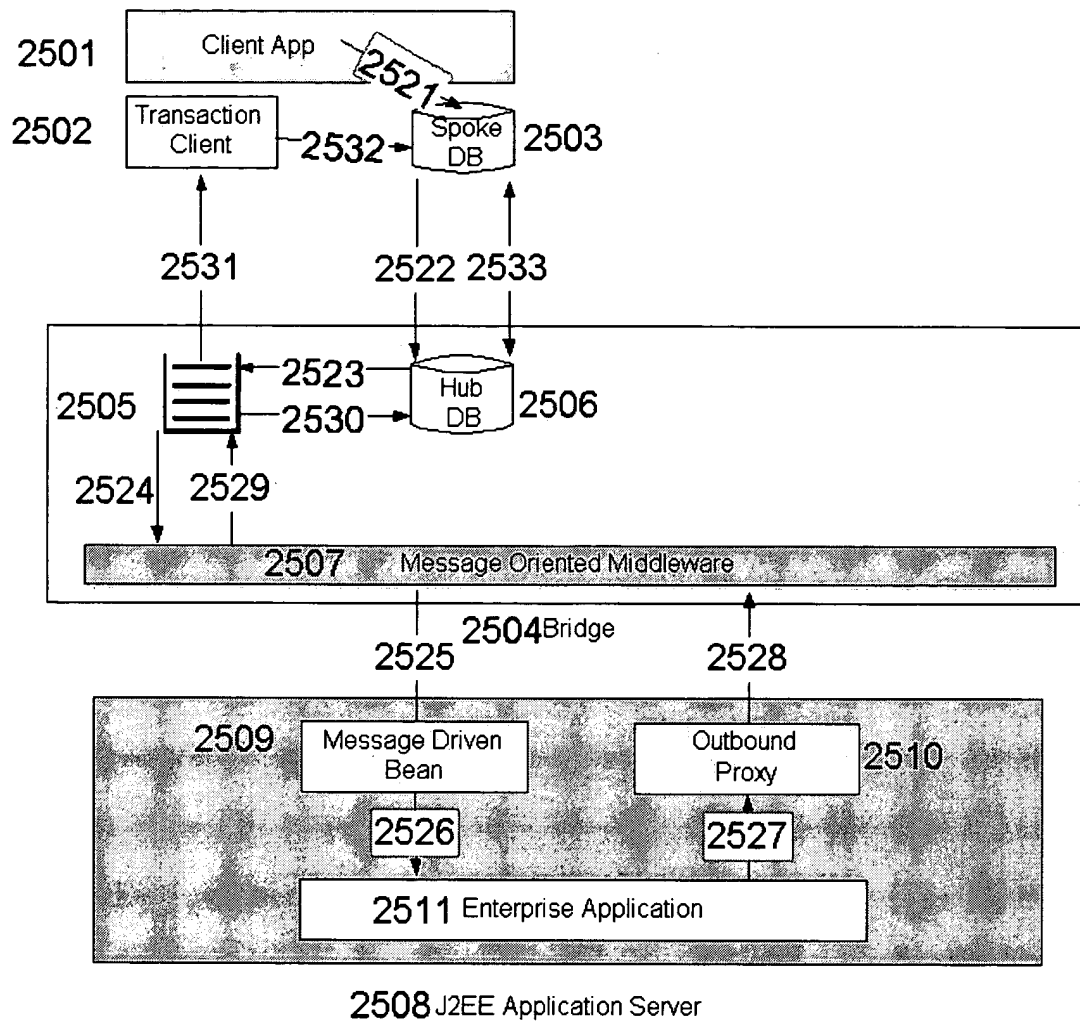


Fig 25

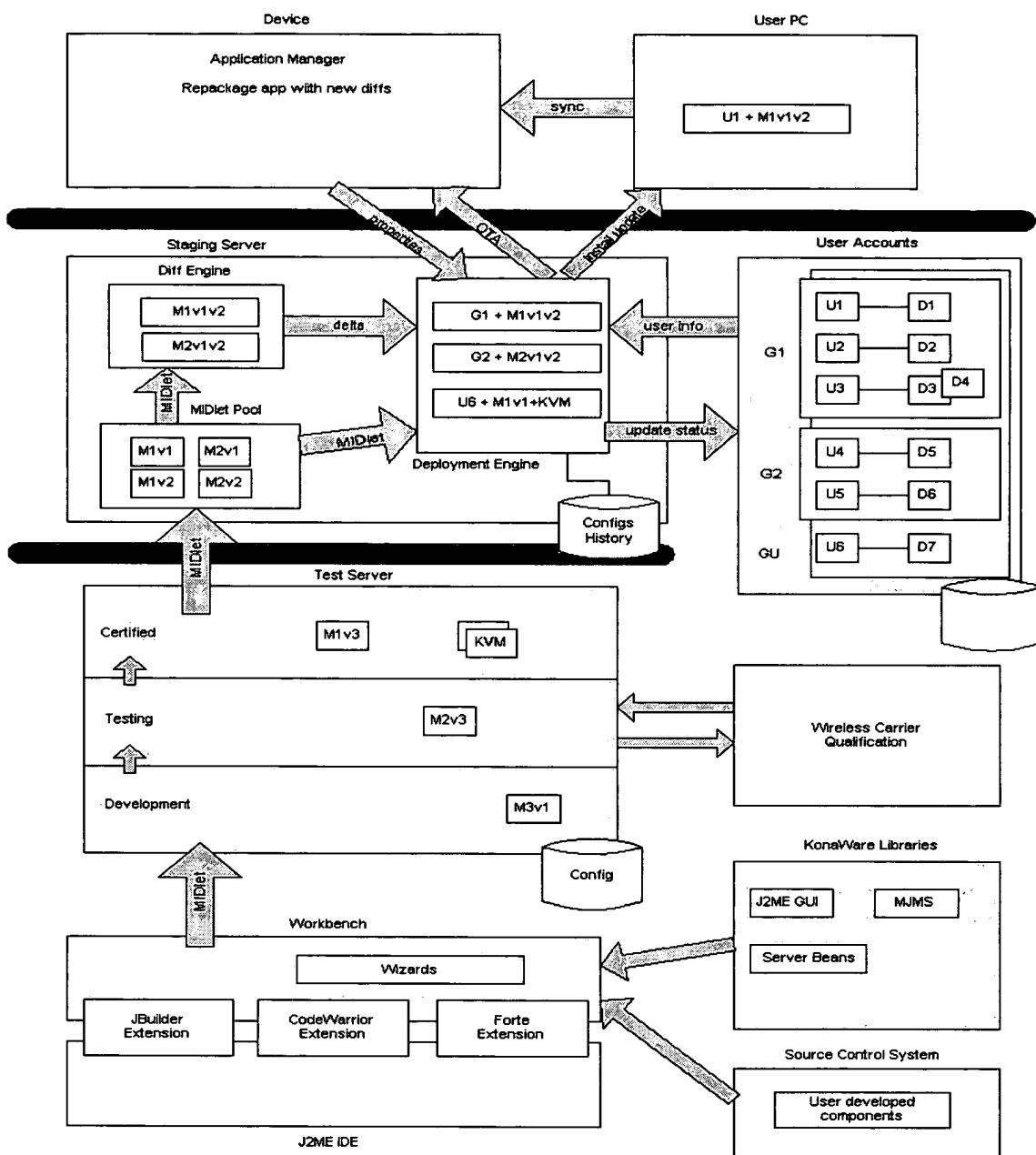


Fig 26

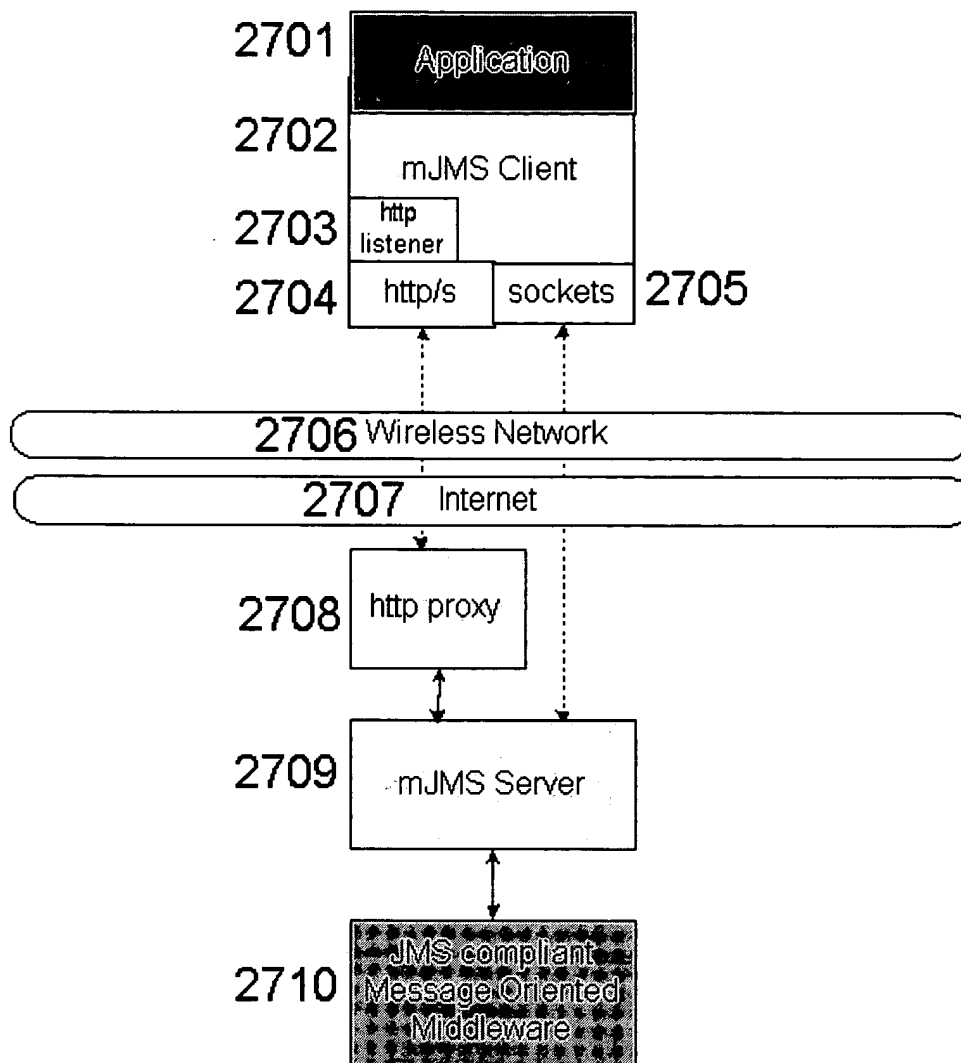


Fig 27